

PATENT COOPERATION TREATY

Translation

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference 04S0419P	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2004/006609	International filing date (day/month/year) 11.05.2004	Priority date (day/month/year) 12.05.2003
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International Patent Classification (IPC) or both national classification and IPC

Applicant
TOKYO ELECTRON LIMITED

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:

☐ paid additional fees

☐ paid additional fees under protest

☐ not paid additional fees

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with

☒ not complied with for the following reasons:

A technical feature common to claims 1-28 is "a vaporizer which is equipped with a vaporizing chamber where liquid material is vaporized -----, an atomizing unit -----, a delivery unit which sends out gaseous material and -----, and heating units -----." As the constituent concerned is commonly known, this point is not recognized as "a special technical feature" within the meaning of the second sentence in PCT rule 13.2.

Therefore, "a special technical feature" of claims 1-5, 24, 25 and 28 is that "the delivery unit is equipped with a filter member that covers the above-mentioned gas exit while allowing the gaseous material to pass through, and an electric-heating member that transfers heat of the above-mentioned heating units to the above-mentioned filter member."

On the other hand, "a special technical feature" of claims 6-16 (the second embodiment) and claims 17-23 and 27 (the third embodiment) is as follows respectively:

(Second embodiment)

That "the delivery unit is equipped with a filter member which covers the above-mentioned gas exit while allowing the gaseous material pass through, and a sliding plate which covers the above-mentioned filter member on the other side of the above-mentioned gas exit."

(Third embodiment)

That "The delivery unit is provided with (i) a plate member jacketing the above-mentioned gas exit and the wall surface surrounding it with a space left and with the circulation opening unit secured, (ii) formation of a gas circulation space between the above-mentioned plate member and the above-mentioned wall surface which connects the above-mentioned vaporizing chamber and the above-mentioned gas exit, (iii) multiple posts which are arranged inside the above-mentioned gas circulation space and function as a fluid baffle, and (iv) a heater which heats the above-mentioned gaseous material flowing through the above-mentioned gas circulation space."

Thus, it is considered that there is no technical relationship among the main embodiment, the second embodiment and the third embodiment involving one or more of the same or corresponding special technical features.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

☒ all parts

☐ the parts relating to claims Nos. _____

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1 - 28</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1 - 28</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1 - 28</u>	YES
	Claims	_____	NO
2. Citations and explanations:			
<p>Document 1: JP, 7-94426, A (Ryoden Semiconductor System Engineering), 7 April, 1995 (07.04.95), Fig. 1, paragraph 0031 (Family: none)</p> <p>Document 2: JP, 7-310185, A (Hitachi, Ltd.), 28 November, 1995 (28.11.95), Fig. 1, paragraph 0028 (Family: none)</p> <p>Document 3: JP, 2000-119858, A (Mitsubishi Materials Corp.), 25 April, 2000 (25.04.00), paragraph 0006 (Family: none)</p> <p>Document 4: JP, 8-131812, A (Nippon Tairan Kabusiki Kaisha), 28 May, 1996 (28.05.96), paragraph 0021 Fig. 3, (Family: none)</p> <p>Document 5: JP, 6-310444, A (Ryoden Semiconductor System Engineering), 4 November, 1994 (04.11.94), Figs. 13, 14 (Family: none)</p>			
<p>Claims 1-28</p> <p>The inventions described in claims 1-28 appear to be novel and to involve an inventive step in view of documents 1-5 cited in the ISR.</p>			
<p>None of documents 1-5 describe nor suggest "a filter member which covers the above-mentioned gas exit while allowing the gaseous material to pass through and a heat-transfer member which transfers heat of the above-mentioned heating units to the above-mentioned filter member" described in claims 1-5, 24 and 25, "a filter member which covers the above-mentioned gas exit while allowing the gaseous material pass through, and a sliding plate which covers the above-mentioned gas exit on the opposite side of the above-mentioned gas exit" described in claims 6-16, 24 and 26 □ "a plate member which covers the above-mentioned gas exit and the wall surface surrounding it with a space left and with the circulation opening unit secured, formation of a gas circulation space between the above-mentioned plate member and the above-mentioned wall surface which connects the above-mentioned vaporizing chamber and the above-mentioned gas exit, multiple posts which are arranged inside the above-mentioned gas circulation space and function as a fluid baffle, and a heater which heats the above-mentioned gaseous material flowing through the above-mentioned gas circulation space" described in claims 17-23, 24, 27 and 28.</p>			
<p>Each of constituent features brings about the effect that sprayed material and foreign material are not exhausted from the vaporizer and the effect that, in the case of using a filter, it is not easily clogged.</p>			

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Box No. VI Certain documents cited

1. Certain published documents (Rule 43bis.1 and 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
JP 2004-21183 A (SHIMAZU CORPORATION)	29.07.2004	01.07.2003	

Figs. 2, 5b, 7, Claim 1-3
Paragraph Nos. 0005, 0012, 0015, 0024-0034 (Family: none)
E and X to claims 1-5, 25, 6-8, 12-16, 26

2. Non-written disclosures (Rule 43bis.1 and 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 7, 8

In claim 5 cited in claims 7 and 8, "a sliding plate" is not described.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 11

The constitution is unclear as to in which direction of the sliding plate and how a slit (claim 11) as an opening (claim 10 cited in claim 11) formed on the sliding plate itself is arranged and as to how it has "a form bending in the direction of thickness of the sliding plate."